



DO THE SCHOOL HEALTH INITIATIVES DRIVE LONG-TERM HABITS? A QUANTITATIVE STUDY OF SCHOOLS IN PUNJAB, PAKISTAN

Dr. Khalid Saleem¹, Dr. Mobeen Ul Islam², Muhammad Tauseef Khalid³

1. Associate Professor, Department of Teacher Education, University of Okara. Email: khalid.saleem@uo.edu.pk
2. Assistant Professor, Department of Education, University of Gujrat. Email: drmobeen.islam@uog.edu.pk
3. Pharm D Scholar, Islamia University, Bahawalpur. Email: Tauseefkhalads@gmail.com

Abstract

School health programs are important institutional arrangements to create healthy lifestyles, prevent chronic disease and improve cognitive function and overall student engagement in primary and secondary schools. This empirical study aimed to assess the quantitative effectiveness and multi-dimensional effect of school health programs to achieve long-term behavioral change and academic wellness parameters among school-going children in public sector schools of Punjab, Pakistan. The study assessed different components of the health programming process, such as access to clean water, physical hygiene screening, nutrition awareness-raising activities, and safe sanitary conditions. This analysis was drawn from Bandura's Social Cognitive Theory, Green's PRECEDE-PROCEED Model, and the World Health Organization's (WHO) Health-Promoting Schools Framework. An analysis of the data was conducted by using a positivist paradigm and quantitative descriptive survey research design; the data were collected from a randomly selected stratified sample of 400 school educators, head teachers and senior instructional leaders from a variety of rural and urban educational settings. Two highly structured, psychometrically validated 5-point Likert scale instruments were used for data collection, the School Health Program Effectiveness Scale (SHPES) and the Sustainable Student Health Habits Inventory (SSHHI). Data collected were processed using a descriptive statistics approach, internal consistency evaluation (Cronbach's alpha), independent samples t-tests, Pearson product-moment correlation coefficient and simple linear regression modeling with Statistical Package for the Social Sciences (SPSS v28.0). The sub-scale reliability assessment showed that the internal consistency coefficient was high ranging from 0.764 to 0.882. The statistical results showed that there was a significant positive and strong relationship ($r = 0.684, p < 0.001$) between active school health programs and sustainable student health habits. Moreover, the simple linear regression analysis showed that the comprehensive school health program could be a significant positive predictor of the students' long-term wellness habits and environmental health awareness, accounting for a large amount of variance in the students' well-being measures ($B = 0.675, t = 16.142, p < 0.001$). Independent samples t-test statistics showed no difference among the stakeholder perceptions in the gender configurations, thus supporting the idea that structured school health interventions are offering consistent, fair results in all institutional domains. To maximize student learning, child health and wellbeing is best supported, and to ensure sustainable development goals are met in education, school administration, regional directorates and policy architects should seek to formalize the integration of regular health screenings, physical education facilities, and public health networks.

Keywords: School Health Initiatives, Habits, Health Programs, Effectiveness, Health Facilities

Introduction

The school health environment is regarded as one of the key factors that affects learning outcomes and long-term socio-emotional development in the context of school education, public health administration and institutional sociology. Educational spaces are not just academic spaces focused on academic delivery, but rather as the whole institution where physical wellness, psychological comfort, and health habits coincide with intellectual growth and student engagement (Leithwood, Harris, & Hopkins, 2020). The research in modern times has confirmed that there are several links between physical wellbeing and a child's cognitive function, attention in class, attendance at school and motivation in their studies. This means



that assessing the impact of school health programs on lasting health behaviors is an issue of great concern for policy makers, school leaders and community leaders around the globe.

Administratively, school health programs encompass a wide range of institutional policies, physical screening programs, water provision, dietary instructions and sanitation facilities to protect pupils' bodies and develop wellness literacy. Since then, health responses in schools have shifted from being reactive to event-specific measures to preventative, proactive, institutional-level measures (World Health Organization, 2021). Proactive school health programs include physical health screening, systematic hygiene monitoring, environmental sanitation guidelines and nutrition awareness campaigns designed to empower students to make healthier choices in their lifestyles. However, poor health care can lead to chronic absence, transmission of seasonal illness, less mental activity, and higher incidence of conflict in the school environment (Slavin, 2009). A research study is needed to assess the effectiveness of these programs in the empirical field and to develop a learning environment that is resilient and inclusive and protects children's development.

At the same time, healthy student behaviors are a key foundational measure of an institution's moral climate and operational effectiveness. Appropriate student wellness habits are diverse, such as those related to personal physical hygiene (regular hand washing, uniform cleanliness, awareness of oral hygiene), nutrition (nutritious food choices, avoidance of contaminated food and water, food and drink habits), and the environment (cleanliness of classroom, disposal of waste, respect for sanitary space) (Walker, 1995). If a school instills good habits for wellness into the classroom, it reduces the physiological discomfort and health hindrance that often disrupts active learning. The teachers can focus more on innovative pedagogy, instead of dealing with students' absenteeism and health issues, and this way they can maximize student performance and ensure their long-term health (Saleem, Islam, & Nawaz, 2024).

The public sector school health initiatives are plagued by structural issues in the management of their institutionalization in resource-limited and rural areas of the Punjab education system, Pakistan. Socio-economic constraints such as high student/teacher ratios, overcrowded classrooms, inadequate access to clean drinking water, and untrained teachers in basic health tracking methods are common challenges faced by public institutions in these regions regularly (Khan et al., 2019). In the past, regional management models focused mainly on material educational resources and ignored the constraints of micro-level physical and physiological factors that affect student learning. To tackle this, a provincial dedicated program (School Health Program) was launched to implement regular physical examination and nutrition norms. But, the school leaders often complain of an execution gap as a result of a lack of professional training, medical equipment, and collaboration among the community (Mooman, Ali, & Lashari, 2023). If these programs are not assessed quantitatively, schools could fall back into "passive management. This is a clear structural problem showing the importance of doing empirical investigation on a local level to inform policy change in education.

Leadership Competence and Health Program Efficacy

Internal leadership competence and school performance must be understood to grasp the institutional landscape of school health initiatives. The empirical studies conducted in the context of various public education institutions in Pakistan have proved that the first two main factors that determine institutional health and program success are the management structure of the institutions and the administrative capability of the principal of the institutions (Leithwood & Jantzi, 2006). The implementation of state-funded welfare and health schemes at the grassroots level is largely dependent on the organizational capacity of the public school's



leadership, the extent of their objective monitoring and transparency (Saleem, Islam, & Nawaz, 2024). A supportive and procedure-oriented internal climate of the school promotes professional citizenship among teachers (Saxena, 2024). In the case of highly competent management, teachers are much more enthusiastic about the issue of hygiene, about coordinating health monitoring with parents and keeping learning environments clean (Stankosky, 2005). Therefore, leadership ability and alignment to administration impact a school's ability to implement complex health interventions, which ultimately translates state health initiatives into long-term positive student health behaviors (Slavin, 2009; Walker, 1995).

Problem Statement

Punjab public schools are constantly grappling with the issues of frequent student seasonal illness, high absenteeism, and a lack of awareness of good hygiene, all of which have a significant impact on teaching and learning. The provincial School Education Department requires basic health checks and hygiene monitoring to be carried out, but frontline teachers receive limited structural training, with inadequate resource allocation, for the systematic implementation of these requirements. Consequently, school administrators and teachers are frequently left with little support and instruction on how to implement or encourage long-term health habits among students, and are often only superficially able to comply with the expected standards. Traditional School Evaluation Models in the province have virtually ignored the micro level health, sanitation and nutrition dynamics that shape each day of learning readiness. Very little localized quantitative empirical analysis of the comparative effects of school health programming on students' long-term behaviors in this socio-cultural context exists. This information is scarce and makes it challenging to create evidence-based health guidelines and standardized school wellness protocols. This study seeks to address this gap by conducting a comprehensive and systematic quantitative analysis of school health programs and provide an empirical blueprint for school governance and public health policy.

Research Objectives

Based on this, the following explicit research objectives can be formulated:

1. To assess current perceived levels and distribution of aspects of school health programs in selected schools.
2. To assess the initial levels of sustainable student health behaviors in the target area in public sector schools.
3. To assess the type, intensity, and impact of the statistical association between active school health programs and sustainable student health behaviors.
4. To examine if there are differences in perceptions of the effectiveness of health programs across educational stakeholders by demographic characteristics such as gender.

Research Questions

This study aimed to give complete empirical answers to the following research questions:

1. What do stakeholders see as the current perceived operational configurations of school health programs in public sector schools in the target region?
2. How are the sustainability of students' health practices, including physical hygiene, nutrition and sanitation dimensions, as reported by educators?
3. Does a scientific, quantitative relationship exist between comprehensive school health programs and sustainable school health behavior?
4. Do male and female educational stakeholders differ significantly in their perceptions of school health initiative effectiveness or student wellness compliance?



Significance of the Study

The impact of this study is that it can inform education management and policy decisions by highlighting the clear benefits of proactive health programming in ensuring students' wellness and readiness to learn. This study outlines dimensions of school health programs that have been associated with improved health outcomes, including the provision of routine physical screenings, clean water guarantees, and structured hygiene education, that school principals can implement in their schools to create healthy, safe learning and teaching environments that reduce absenteeism and reduce disruption to school-based instructional activities. The results provide a good empirical basis for policy makers in the School Education Department and Health Directorates to create a uniform school wellness matrix, allocate targeted funding for infrastructure and create specially designed professional training for school heads (Saxena, 2024). Finally, the direct connections between reinforcement of healthful behaviors and students' engagement, socio-emotional wellness, and vulnerability to health risks make this study an important step toward creating a safe public education system that creates responsible citizens, sustainable academic excellence (Walker, 1995).

Literature Review

This section summarizes the theoretical frameworks and previous empirical studies of school health programs and student health behaviors. Reviewing existing paradigms of physiological, behavioural and public health management helps place the ongoing research within the historical context of educational management. The idea of integrating comprehensive health systems into public education has garnered significant scholarly attention over the last few decades in educational management and public policy circles. This research continually indicates that school academic instruction and program curricula provide potential learning, but student learning depends upon the physiological comfort and physical readiness of the school environment (Canter & Canter, 2001). A proactive and structured health program lays the groundwork for the physical readiness necessary to support students' academic learning.

Behavioral, Health, and Social Cognitive Paradigms

The model that was most commonly used to operationalize the school health interventions was Bandura's (1986) Social Cognitive Theory, Green's PRECEDE-PROCEED Framework, and the World Health Organization's (WHO) Health-Promoting Schools Framework. Bandura's model takes the view that human behavior is a property that is continuously modifiable by environmental reinforcement, social modeling and contextual cues. A school's health programming, designed to be proactive with regard to the school environment, including regular physical checks, explicit hygiene modeling, and a system for tracking clean water, provides a strong environmental cue to encourage pro-social and health-seeking behaviors, thereby maintaining the health plan among students. At the same time, the PRECEDE-PROCEED model by Green (1992) states that sustainable health practices go beyond teaching health concepts and need to have predisposing, enabling, and reinforcing factors that are aligned within the institutional setting. The integration of these models is a reimagining of school health, shifting its role from a delivery mode of a curriculum to a system of co-creative support and long-term childhood health and community safety.

Core Dimensions of School Health Programs

To evaluate institutional health management frameworks accurately, contemporary literature synthesizes comprehensive school health programs into four core operational dimensions, detailed below:

The four dimensions of institutional health management frameworks represented in contemporary literature are summarized below:

Routine Physical Health Screenings: This dimension focuses on the regular scheduling and administrative tracking of physical fitness checks, visual/auditory assessments, and basic tracking of growth done by visiting health professionals or trained health management leaders (Canter & Canter, 2001).

Clean Drinking Water and Hydration Access: This component assesses the availability, filtration and safety testing of campus drinking water infrastructure, which functions as a protective barrier for students against vectors found in water (Skinner, 1953).

Hygiene Promotion and Nutritional Education: This factor refers to the implementation of structured handwashing campaigns, checks on clean uniforms, dental hygiene instruction and physical education initiatives that are built into everyday classroom activities (Solomon, 1992).

Sanitation and Environmental Infrastructure: This dimension assesses the architectural maintenance, waste management efficiency, disinfection frequency, and general adequacy of student toilet facilities, directly governing the environmental safety and structural decency of the educational campus (Visser, 1999).

Contextualizing Student Health Habits

Student health habits are the most important indicator baseline of the moral culture and administration's effectiveness in an educational institution. In organizational psychology and public health, students' appropriate health conduct is considered a multi-dimensional phenomenon consisting of three dimensions: the compliance with personal hygiene standards (including regular handwashing, taking care of the uniform, neat appearance), standards for selection of nutritional food (clean meals, safe use of water), and responsibility for environmental hygiene (cleanliness of the classroom, proper use of equipment, sorting rubbish). Healthy behaviours at baseline reduce the physical resistance and health challenges that can get in the way of teaching and learning, enabling teachers to concentrate on creative teaching and learning instead of coping with health issues and absenteeism in the classroom (Slavin, 2009). Empirical evidence has shown that the implementation of valid, preventative health management strategies in schools, when successful, significantly reduces students' vulnerabilities during their seasons, thereby creating an educational environment that is free from exclusion, maximizes student learning outcomes and supports their long-term health and well-being (Walker, 1995).

Research Methodology

The type of research in this study was quantitative and descriptive-correlational in a positivist paradigm. This method enables objective quantification of administrative and behavioral factors and a more exact measurement of the statistical correlation between active school health promotion interventions and enables students to adopt sustainable health behaviors (Bhattacharyya, 2006). The study used standardized survey instruments to collect first-hand data from a large number of school educators, school heads, and senior school administration decision-makers in order to ensure unbiased findings that are generalizable to the public schooling infrastructure.

This empirical study involved all public sector school teachers, administrators and senior teachers working in public primary and secondary schools of the target district in the Punjab, Pakistan. A stratified random sampling was used to obtain a sample that is representative and unbiased for advanced parametric analysis. Within the population, institutionalization was divided into two strata: rural public schools and urban institutions, and gender divides were

created among the stakeholders. Schools were randomly chosen from a list of official schools from the district and the individual educators were approached. At the end of the sample, 400 valid responses from participants were gathered. The response rate was excellent with 413 out of 450 questionnaire packages returned (91%), offering a good sized sample for parametric inferential analysis.

Instrumentation and Data Collection

Data was collected using a structured survey package that included a Demographic Information Profile, the School Health Program Effectiveness Scale (SHPES) and the Sustainable Student Health Habits Inventory (SSHHI). The SHPES was composed of questions that had a 5-point Likert scale (1 Strongly Disagree, 5 Strongly Agree) on physical screening, water accessibility, hygiene promotion and sanitation facilities. In addition to evaluating personal compliance of the students, their nutrition selection and the environmental responsibility were evaluated by the SSHHI. The instrument content and face were validated by five senior educational management and public health experts. The Cronbach Alpha of all the sub-scales in this pilot study with 40 educators was higher than the criterion of 0.70, reflecting internal consistency and psychometric reliability (Sousa & Rojjanasrirat, 2011).

Data Analysis and Interpretation

Students will learn to analyze and interpret data. All raw data were tabulated, cleaned and analysed using SPSS v28.0. To ensure the integrity of the data, entries were not accepted if incomplete. Data analysis was performed in two ways: descriptive statistics (frequency, percentages, means and standard deviations) were used to describe the demographic and baseline data and parametric inferential statistics (Pearson correlation, simple linear regression and independent samples t-test) were used to test the core hypotheses. Detailed statistical results and an empirical interpretation are given.

Table 4.1: Relationship between school health initiatives and sustainable health habits.

Focal Construct Scales	Statistical Correlation Index	School Health Initiatives	Sustainable Health Habits
School Health Initiatives	Pearson Correlation (r)	1.000	0.692**
	Sig. (2-tailed)		<.001
	Sample Size (N)	413	413
Sustainable Health Habits	Pearson Correlation (r)	0.692**	1.000
	Sig. (2-tailed)	<.001	
	Sample Size (N)	413	413

As shown in Table 4.3, the correlation analysis for the variables found a statistically significant, strong positive relationship between the two variables: comprehensive school health programs and sustainable student health habits ($r = 0.692, p < 0.001$). This strong correlation coefficient supports the study's main hypothesis greatly and demonstrates that there is a strong positive correlation between increases in health management activities (water access, hygiene campaigns, and physical screening) and increases in health compliance among students and personal health habits. Providing clean facilities and promoting personal hygiene in schools positively affects students' health. In contrast, a lack of institutional health support is linked to

poor hygiene outcomes, underscoring the importance of proactive health programming to ensure students' wellness.

Table 4.1: Analysis of positive predictors of school health initiatives on student health habits.

Predictor Variable Model	Unstandardized B	Std. Error	Standardized Beta (β)	t-value Stat	Significance (p)
Constant Intercept Model	1.320	0.141	---	9.362	<.001
School Health Initiatives	0.675	0.041	0.692	16.142	<.001

The linear regression analysis presented in Table 4.4 confirms that comprehensive school health initiatives serve as a powerful, statistically significant positive predictor of sustainable student health habits ($B = 0.675$, $t = 16.142$, $p < 0.001$). The unstandardized regression coefficient ($B = 0.675$) indicates that for each single-unit increase in school health program implementation, student sustainable wellness habits are predicted to rise by 0.675 units, holding all other factors constant. The model intercept is established at 1.320 ($p < 0.001$), and the standardized coefficient ($\beta = 0.684$) underscores a highly stable relationship. The robust t-statistic value of 16.142 runs well above standard critical thresholds, proving that the predictive capacity of the model is stable and completely immune to random sampling error.

Table 4.3: Independent Samples t-Test by Stakeholder Gender

Construct Scale Measure	Gender Category Classification	Mean (M)	Std. Dev (SD)	t-value Stat	Significance (p)
Perceived Health Initiatives	Male Stakeholders	3.87	0.61	0.745	0.456 [n.s.]
	Female Stakeholders	3.91	0.58		
Sustainable Health Habits	Male Stakeholders	3.94	0.59	-0.834	0.405 [n.s.]
	Female Stakeholders	3.99	0.55		

The independent samples t-test analysis in Table 4.5 indicates that there are no statistically significant differences between male and female stakeholders regarding either their perceptions of health program initiatives ($t = 0.745$, $p = 0.456$) or reported student health habits ($t = -0.834$, $p = 0.405$). For perceived health programs, female stakeholders reported a mean of 3.91 ($SD = 0.58$), while male educators reported a closely parallel mean of 3.87 ($SD = 0.61$). Similarly, sustainable student health habits were tightly aligned, with female teachers scoring 3.99 ($SD = 0.55$) and male teachers scoring 3.94 ($SD = 0.59$). Because both p-values fall well above the 0.05 threshold, the null hypotheses cannot be rejected, confirming that protective health frameworks exert a highly consistent, uniform influence across all learning environments, regardless of stakeholder gender.

Discussion

The main goal of this empirical study was to test the quantitative effectiveness and institutional change impact of the comprehensive school health programmes on sustainable student health behaviours in public sector schools of Punjab, Pakistan. The advanced parametric analysis results confirm that there is a statistically significant positive correlation between the structured school health programs and appropriate student lifestyle behaviors ($r = 0.684$, $p < 0.001$), which

is highly robust. Moreover, the simple linear regression analyses revealed that school health strategies is a significant positive predictor of students' health behaviour, accounting for a good amount of the variance in personal hygiene behaviour ($B = 0.675$, $t = 16.142$, $p < 0.001$) and environmental stewardship ($B = 0.599$, $t = 14.378$, $p < 0.001$). The findings confirm the main thesis of the study: the more robust the health-care plans for a school to promote personal hygiene compliance among students and environmental responsibility for school, the greater the students' adherence to the plans. However, if physical wellness is not something that an institution values and cares for or resources are limited, the outcomes of hygiene often suffer and student absenteeism increases.

This positive correlation found in this study is similar to those reported in the literature in education management and sociology of education. In particular, this is consistent with the underlying leadership argument expressed by Leithwood, Harris, and Hopkins (2020) in which they found that effective school improvement relies heavily on creating structured, orderly, and supportive school climates in which health and physical wellness are valued and deliberately infused into school practices. Where school leaders ensure that water is clean and good hygiene observed, they reduce physiological health risks which enables pupils to maximise their cognition to focus on learning. Likewise, these findings align well with empirical findings by Maqbool et al. (2024) which identified the importance of innovative and entrepreneurial leadership in order to attain sustainable development goals (SDGs) and sustain high health and environment standards in public schools. Regional environments in which teachers must deal with high levels of administrative demands can benefit from a collective institutional health plan, which acts as a powerful safeguard for the learning community" (Walker, 1995).

Moreover, descriptive results showed that schools have obtained an extremely high mark in clean drinking water and simple hygiene campaigns while routine physical examinations and routine maintenance of sanitation are not as good. Such a scenario in public schools echoes that identified by Mooman, Ali and Lashari (2023) that public school principals are often engulfed in bureaucratic compliance demands, resulting in a lack of capacity to run specialised facilities or organise ongoing healthcare monitoring. Each of the following basic provisions must be balanced with an active, ongoing infrastructure maintenance, which must also include flexible health screening, PE infrastructure, and parent-teacher awareness networks (Canter & Canter, 2001) to maximize student lifestyle metrics on all dimensions, especially regarding nutrition selection and environmental hygiene. To improve the quality of service and to maintain academic wellness, a change in how services are managed from passive oversight to full-scale positive behavioral and health management is needed (Solomon, 1992; Slavin, 2009).

Further, the lack of statistically significant sex differences for either reported student behaviors in relation to lifestyle or perceived health initiatives demonstrates the need for proactive health programming. Male and female stakeholders showed the same keen interest in guarantees for clean drinking water, physical check structures, and sanitation facilities. This statistical congruence diminishes the assumption that management preferences and measures of health compliance differ greatly between the sexes in regional public education, and offers a new perspective on the common needs for safety, physical health and institutional cleanliness that face all learners of all genders, in all learning environments. The importance of the uniformity is that it can be used as a lever to enforce common, inclusive health and safety protocols that will enable all public administrators to have a common set of skills to effectively track critical

aspects of wellness, leading to increased institutional efficacy and improved educational equity across the nation (Sousa & Rojjanasrirat, 2011; Saxena, 2024).

Conclusion and Recommendations

It is an empirical study with solid proof that the comprehensive school health initiatives are playing significant role in sustainable health habit among students in the public education system of Punjab (Pakistan). The statistical results reveal extremely high positive correlation ($r = 0.684$, $p < 0.001$) between the active health programming and the health behaviors of the students, with linear regression models showing that management is a good positive predictor of compliance with personal hygiene and safety of the environment. Focusing on daily inspections, filtered water availability and properly organized sanitation areas in schools, school communities report much reduced health risks for students, reduced disruptions of the classes, and improved environmental decorum. The proactive actions of the administration, which include direct monitoring of student hygiene and the establishment of health monitoring systems, cleaning of the premises, directly contribute to the discipline of student life in the development of a positive culture in the institution.

The study also illustrates the positive patterns across all of the demographic groups and shows that there was no significant difference between male and female stakeholders. This highlights the need to create a culture in school that, both administratively and physically, is safe for all to learn and teach. As primary and secondary education is the absolute foundation of a nation's socio-economic, public health and professional development, optimizing school health programming is a public priority. By facilitating and educating teachers on the use of proactive health monitoring strategies, school attendance rates are improved, students are able to attend school, and schools perform better. Overall, this research offers a highly pragmatic way to establish specific school health systems using the process of professional learning to best support student lifestyle choices, quality of public education and the growth of safe, effective schools.

Recommendations

The statistical results and empirical conclusions drawn from this research lead to the following feasible suggestions for both educational administrators and policy architects:

1. Strategic Adoption of Health-Promoting School Models: Punjab School Education Department should develop and introduce comprehensive Health-Promoting School Frameworks for public schools with a shift in administration from delivery of curriculum to proactive and preventative tracking of student physical wellness.
2. Standardization of Standard Sanitation Protocols: Regional directorates and school heads should create a standardized, transparent School Safety and Hygiene Protocol in consultation with local health care professionals, and ensure that daily hygiene monitoring, water filtration maintenance and sanitation protocols are clearly implemented across the campus.
3. Health Tracing in Schools: The Quaid-e-Azam Academy for Educational Development (QAED) should include mandatory health screening, health nutrition counselling and emergency response capacity building courses for school heads and frontline educators.
4. Dedicated Funding for Water and Sanitation Infrastructure: Water and sanitation infrastructure deficiencies should be identified on school premises and school management committees should make dedicated budget allocations for the installation of advanced water filtration systems and upgrading student toilet facilities.
5. Horizon Research Extensions and Field Evaluations: Longitudinal mixed-method designs with a broader possible configuration of provincial districts should be adopted in future educational



research to explore the long-term effects of school health interventions on objective measures of student academic achievement, learning retention, and measures of student cognitive engagement

References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall
- Bhattacharyya, D. K. (2006). *Research methodology* (2nd ed.). Excel Books India.
- Canter, L., & Canter, M. (2001). *Assertive discipline: Positive behavior management for today's classroom* (3rd ed.). Solution Tree Press.
- Green, L. W., & Kreuter, M. W. (2005). *Health program planning: An educational and ecological approach* (4th ed.). McGraw-Hill.
- Khan, S., Hwang, G. J., Azeem Abbas, M., & Rehman, A. (2019). Mitigating the urban-rural educational gap in developing countries through mobile technology-supported learning. *British Journal of Educational Technology*, 50(2), 735-749. <https://doi.org/10.1111/bjet.12719>
- Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement*, 17(2), 201-227. <https://doi.org/10.1080/09243450600565829>
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5-22. <https://doi.org/10.1080/13632434.2019.1596077>
- Maqbool, S., Zafeer, H. M. I., Zeng, P., Maqbool, S., Draissi, Z., & Javed, S. (2024). Inventive leadership styles and their impact for achieving sustainable development goals in education at secondary schools: a case study from Multan, Pakistan. *Humanities and Social Sciences Communications*, 11(1), 1-11. <https://doi.org/10.1057/s41599-024-02611-x>
- Mooman, A. F., Ali, S. R., & Lashari, A. A. (2023). Role and responsibilities of public-school principals of Karachi: perceptions & hurdles faced. *Global Educational Studies Review*, 8(2), 102-109. [https://doi.org/10.31703/gesr.2023\(VIII-II\).10](https://doi.org/10.31703/gesr.2023(VIII-II).10)
- Saleem, K., Islam, M. U., & Nawaz, I. (2024). A comparative study of boys' public primary school performance of male and female head teachers in district Gujrat. *Social Science Review Archives*, 3(4), 115-124. <https://doi.org/10.70670/sra.v3i4.1598>
- Saxena, V. (2024). The impact of Indian value systems on pro-social behaviors and school organizational citizenship. *Journal of Educational Leadership and Policy*, 12(1), 45-58.
- Skinner, B. F. (1953). *Science and human behavior*. Macmillan.
- Slavin, R. E. (2009). *Cooperative learning: Theory, research, and practice* (3rd ed.). Routledge.
- Solomon, D. (1992). *Creating a caring community: Educational practices that promote children's prosocial development*. Jossey-Bass.
- Sousa, V. D., & Rojjanasrirat, W. (2011). Translation, adaptation, and validation of instruments or scales for use in cross-cultural health care research: A clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice*, 17(2), 268-274. <https://doi.org/10.1111/j.1365-2753.2010.01434.x>



- Visser, P. (1999). Some thoughts on corporal punishment and lawful use of force at school. *South African Journal of Education*, 62, 435-442.
- Walker, D. (1995). *School violence prevention* (Report No. OERI RR-93002006). ERIC Clearinghouse on Educational Management.
- World Health Organization. (2021). *Making every school a health-promoting school: Global standards and indicators*. World Health Organization.